MEYERTECH
SECURITY with VISION

ZSI-330

USER MANUAL

ZSI-330

CCTV ISDN Controller
Issue 01

ZSI-330

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Introduction

Thank you for purchasing Meyertech's ZSI-330. Please read this user guide prior to using this product. It will help you to achieve the maximum benefit from the product. The manual covers installation, operation and maintenance of a ZSI-330.

What is a ZSI-330?

A ZSI-330 is part of the ZoneVu Site Controller family. It allows the interconnection of remote sites via an ISDN line.

The unit operates as a transmitter.

Combined with other members of the Meyertech site controller family, an operator can seamlessly control cameras located throughout the country.

When combined with other elements of Meyertech's Site Controller family, a unit can, under alarm conditions, automatically contact a remote control room or can be part of a seamless dial on demand service.

KEY FEATURES

- ISDN connection
- Intersite communications
- Video transmission
- System backup
- 64K or 128K ISDN operation
- Local operator
- Support of Meyertech 3rd Party EFDs

.

The features described in this manual refer to :

Version 1.2.0.0 of the ZSI-330 firmware

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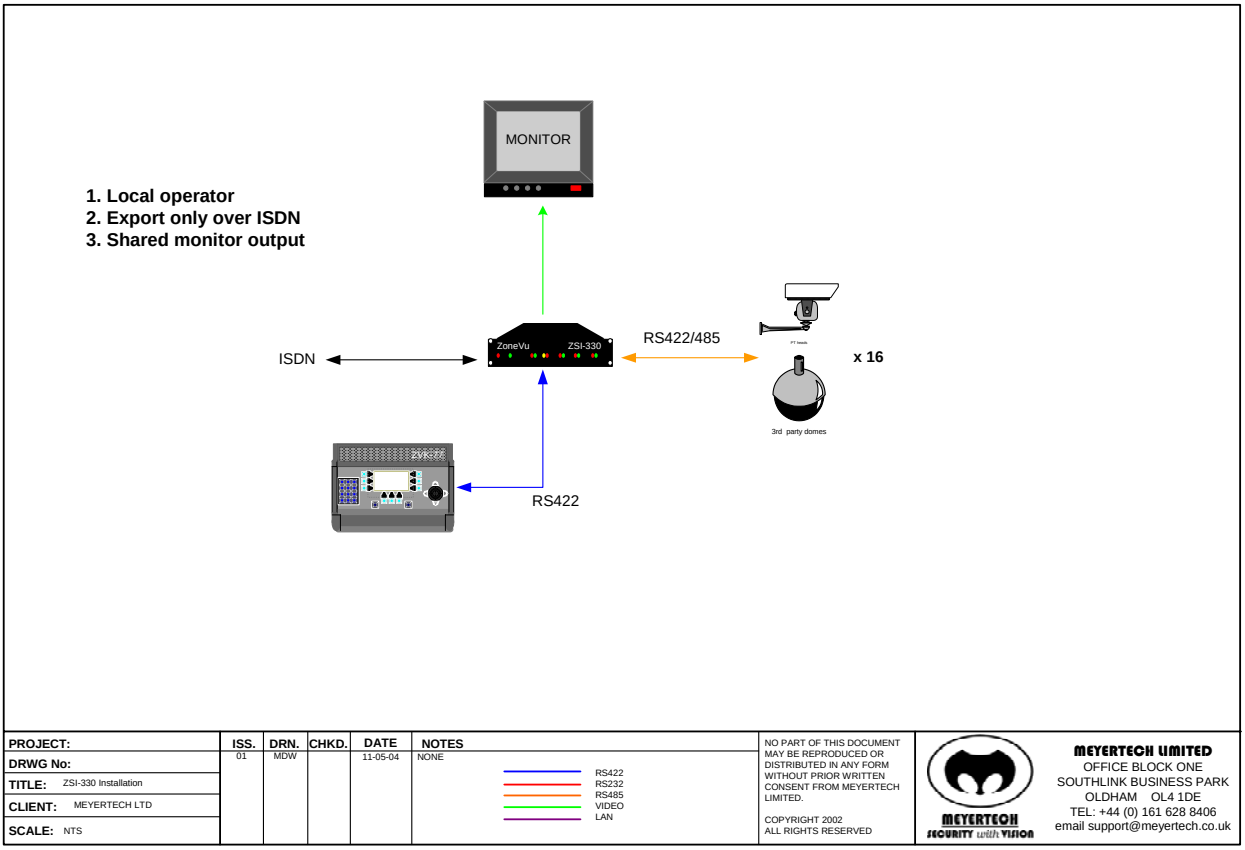
Operation



PROJECT:	ISS.	DRN.	CHKD.	DATE	NOTES
DRWG No:	01	MDW		11-05-04	NONE
TITLE: ZSI-330 Installation					RS422 RS232 RS485 VIDEO LAN
CLIENT: MEYERTECH LTD					
SCALE: NTS					

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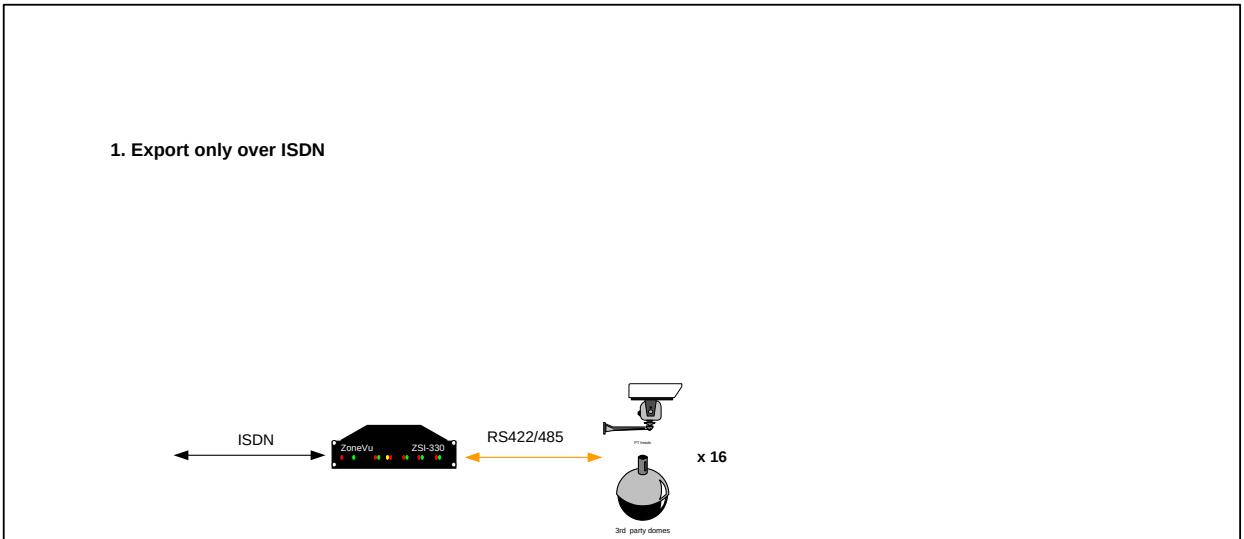

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Installation

See ZSI-330 Installation Guide – available from Meyertech Technical Support

Features

Camera switching

The ZSI-330 supports 16 video inputs and 1 video output. The video output is shared between a single local operator (if present) and the remote operator.

The ZSI-330 can be configured to run a sequence.

Alarm handling

The ZSI-330 supports local alarm events which can be used trigger a range of functions:

- Dialling a remote control room – to report the alarm remotely
- Reporting the alarm to a keyboard – to report the alarm locally
- Energising a local relay
- Sending a local camera to a preset

It can take as an alarm source either its own contact alarm inputs or alarm inputs via a ZoneVu receiver (or supported 3rd party dome – see ZSI-EFD support document).

Auxiliary Outputs

The ZSI-330 supports auxiliary relay outputs which can be mapped to a range of ZoneVu commands. They can also be controlled via alarm events.

EFD support

The ZSI-330 supports Meyertech extensive range of 3rd party EFDs (embedded firmware drivers) on the ZVR port. Contact Meyertech Sales for details of EFD support.

Security

The ZSI-330 supports a PIN code which prevents access to the site by all but authorised equipment.

I/O Operation

Relay Function
The ZoneVu function used to control the specified relay

Contact Inputs
The trigger state of the contact inputs – normally open or normally closed.

OSD

Static caption
A static caption can be set up for each of the 16 video inputs.

Alarm caption
An alarm caption can be set up for each of the 16 alarm contacts.

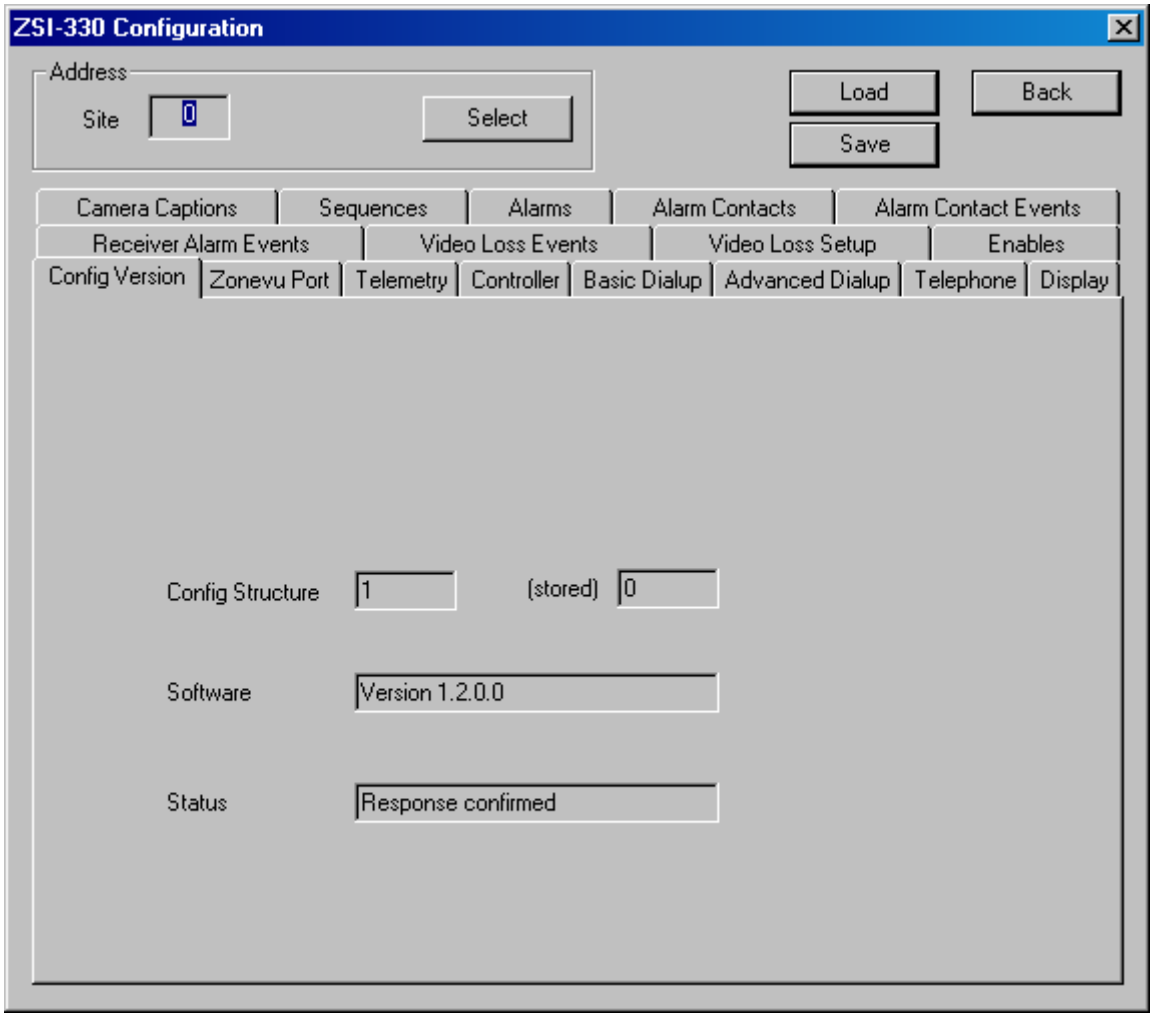
Configuration

Configuration of the ZSI-330 is done through the RS232 port using Meyertech's Windows based configuration tool Mpower.

The ZSI-330 detects when a lead is attached to the RS232 port using the MODE pins, and enters configuration mode.
In configuration mode, the CPU LED flashes at a faster rate and the ZoneVu port is disabled.

Config Version

This entry screen shows information relating to the firmware installed in the ZSI-330



Config structure

The version number of the configuration data format within the attached ZSI-330. – see Mpower manual for more details.

(stored)

The version number of the configuration data format stored on the PC. – see Mpower manual for more details.

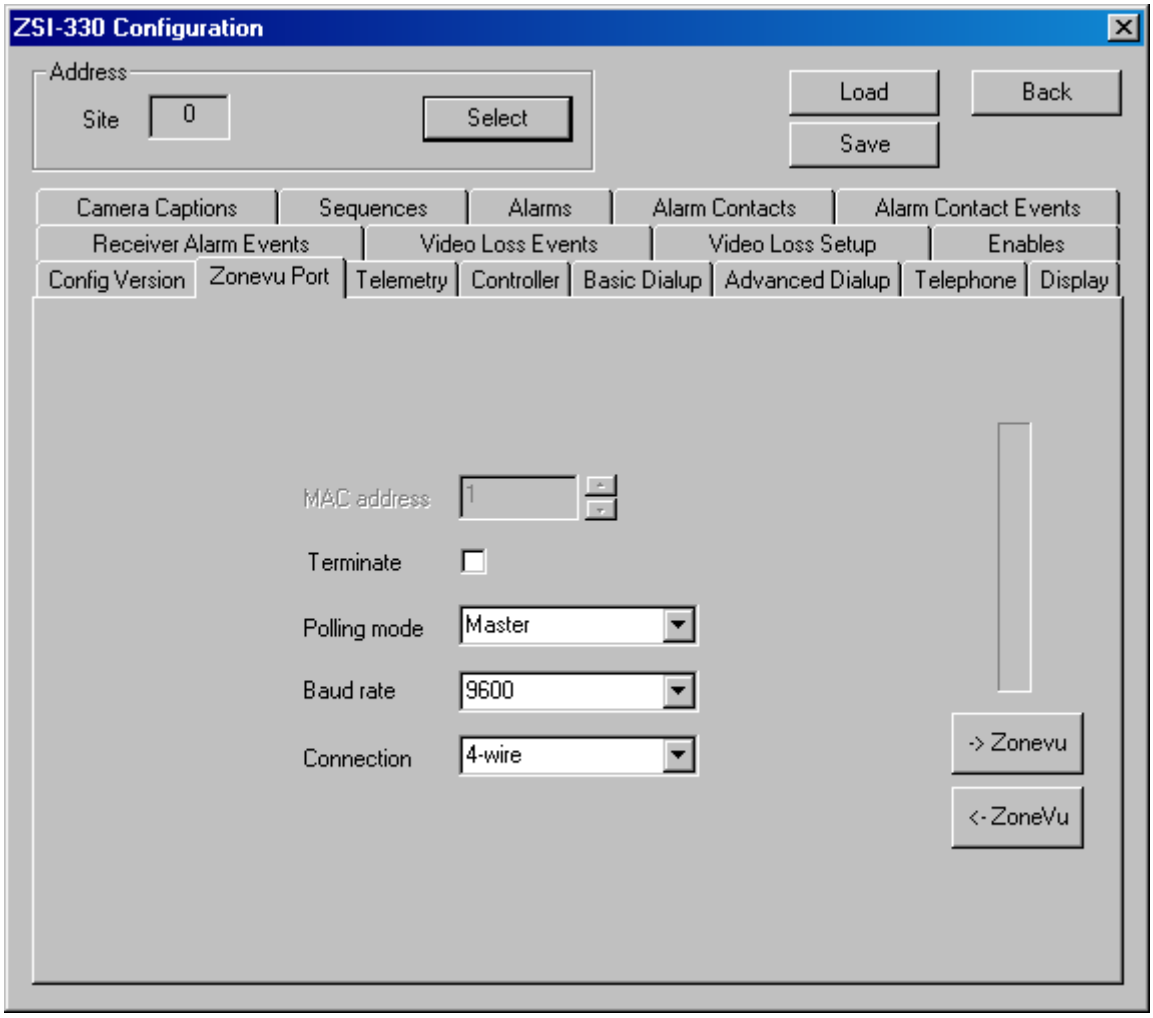
Software

The version number of the ZSI-330's firmware

Status

The status of the communications – see Mpower manual for more details

ZoneVu Port



MAC address

The address that this unit will respond to when polled by a site controller.
Only used when polling mode is set to slave

Default = 1

Terminate

When enabled a 120Ohm termination resistor is used on the receive input. This should be enabled unless the unit is one of many connected to a site controller, and not the last in the chain.

Default = *Off*

Polling mode

Sets the mode of communication used on this port. Set to *Master* if a keyboard is connected, or *Slave* if connected to site controller. *Point-to-point* mode disables polling. **Note Slave mode is not currently available.**

Default = *Master*

Baud rate

Sets the communication speed for this port. Must match all other connected equipment on this port. Available speeds: *1200, 2400, 4800, 9600, 19200, 38400, 57600, 12800*.

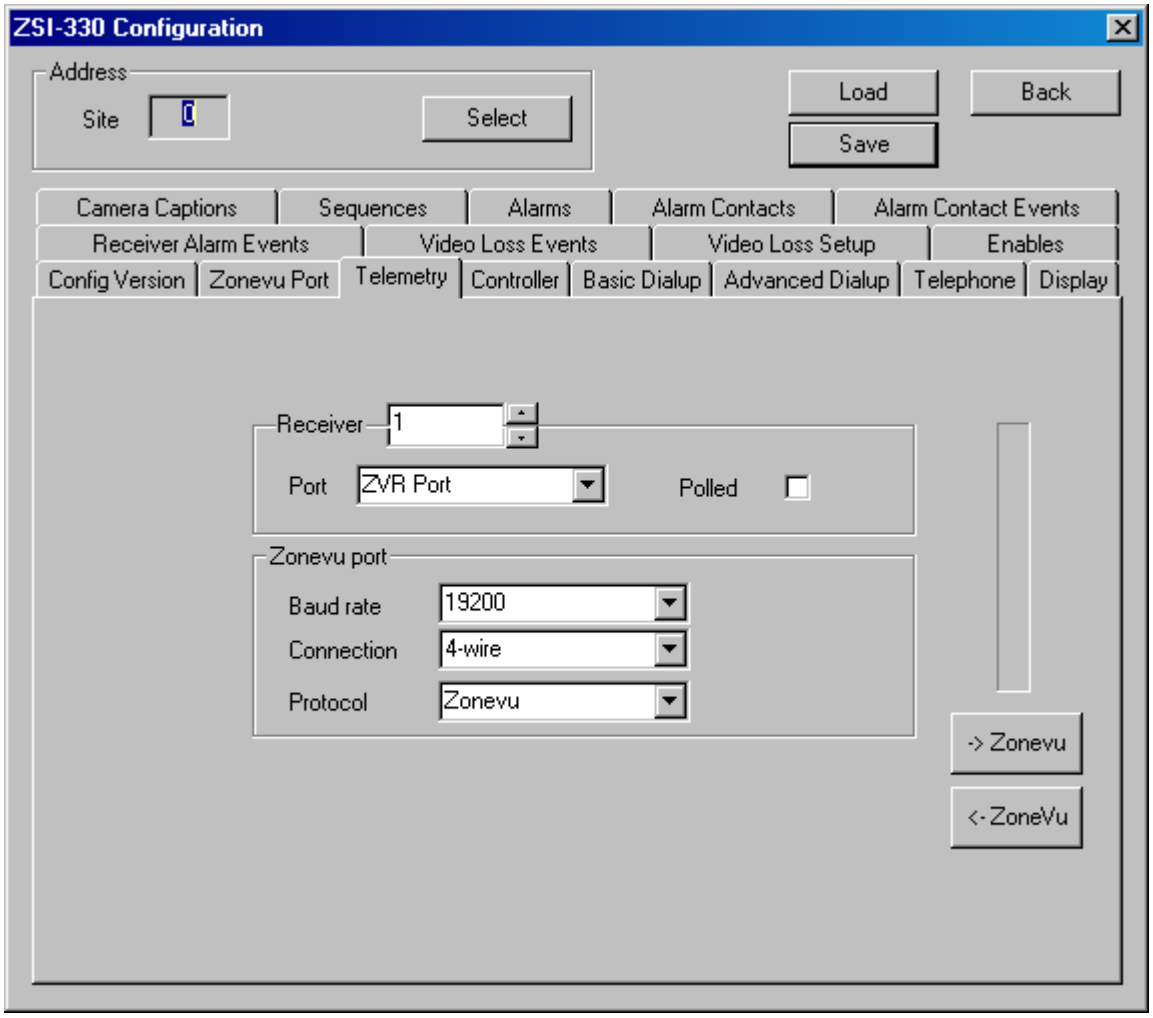
Default = *9600*

Connection

Select the communication method from *2-wire* half duplex or *4-wire* full duplex RS485

Default = *4-wire*

Telemetry



Receiver

For each receiver 1 – 16 the telemetry can be setup as follows

Port

Select the port used to transmit telemetry. *ZVR* port would normally be used unless the receivers are connected through a separate site controller. *ZoneVu* port is used to route telemetry through the site controller (not currently supported).

Default = *ZVR*

Polled

Tick this box if the receiver is to be polled for alarm and status information, where supported

Default = *Off*

ZVR port

Settings for all receivers connected on the ZVR port

Baud rate

Sets the communication speed for the receivers. Available speeds: *1200, 2400, 4800, 9600, 19200, 38400, 57600, 12800.*

Default = *9600*

Connection

Select the communication method from *2-wire* half duplex or *4-wire* full duplex RS485

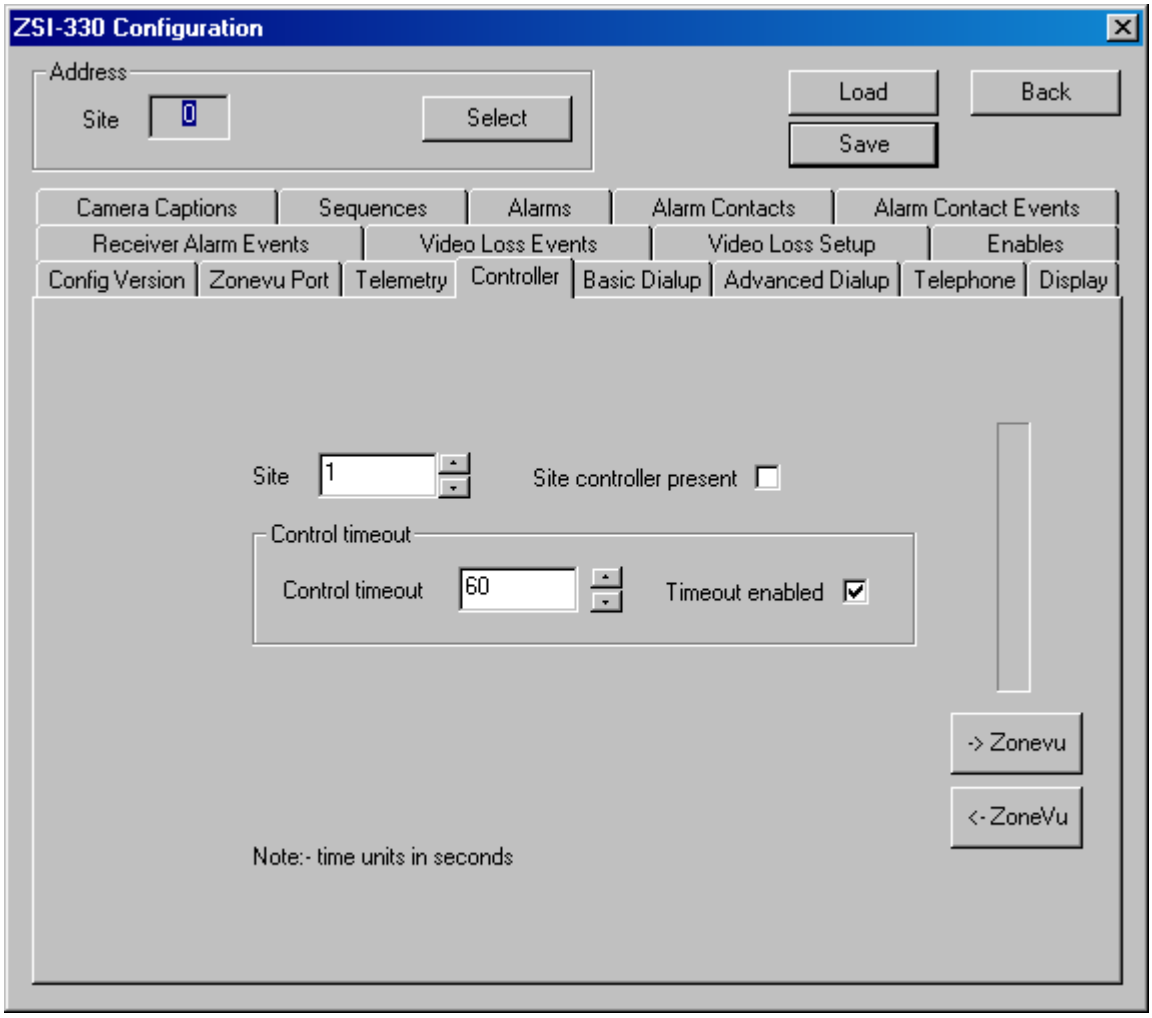
Default = *2-wire*

Protocol

Where a 3rd party EFD has been purchased, the protocol used to control the receivers can be selected to match the type of receivers

Default = *ZoneVu*

Controller



Site

Set the site number for this controller. This is used when controlling the ZSI-330 from a remote site.

Default = *1*

Site controller present

Tick this box if a site controller is attached to the ZoneVu port. **DO NOT USE - This function is not yet supported.**

Default = *No*

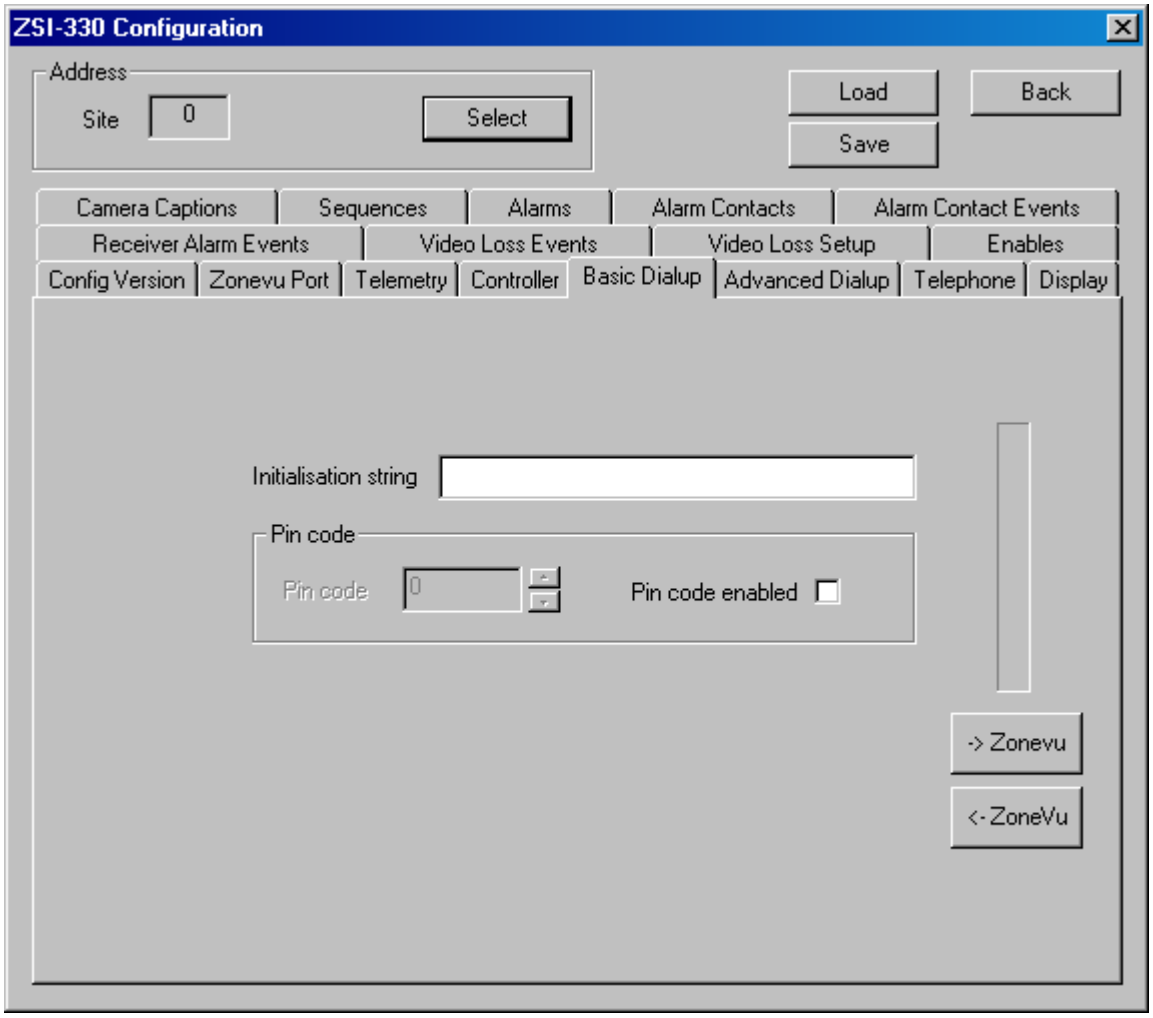
Control timeout

Enter a timeout, in seconds, after which camera control will automatically be removed from a keyboard. The timer is reset whenever telemetry is transmitted.

Default = *60 seconds*

Enabled = *Yes*

Basic Dialup



ISDN Initialisation

A configuration string used to initialise the ISDN link, up to 80 characters in length.
Initialisation is done only at power up. Re-power the unit for this to take effect.

Default = *[Blank]*

The following options may be used:

MMTAUDIOLINEINVOLn Sets line input volume to n%
MMTAUDIOLINEOUTVOLn Sets line output volume to n%
MMTAUDIOECHOON Switches on echo cancellation

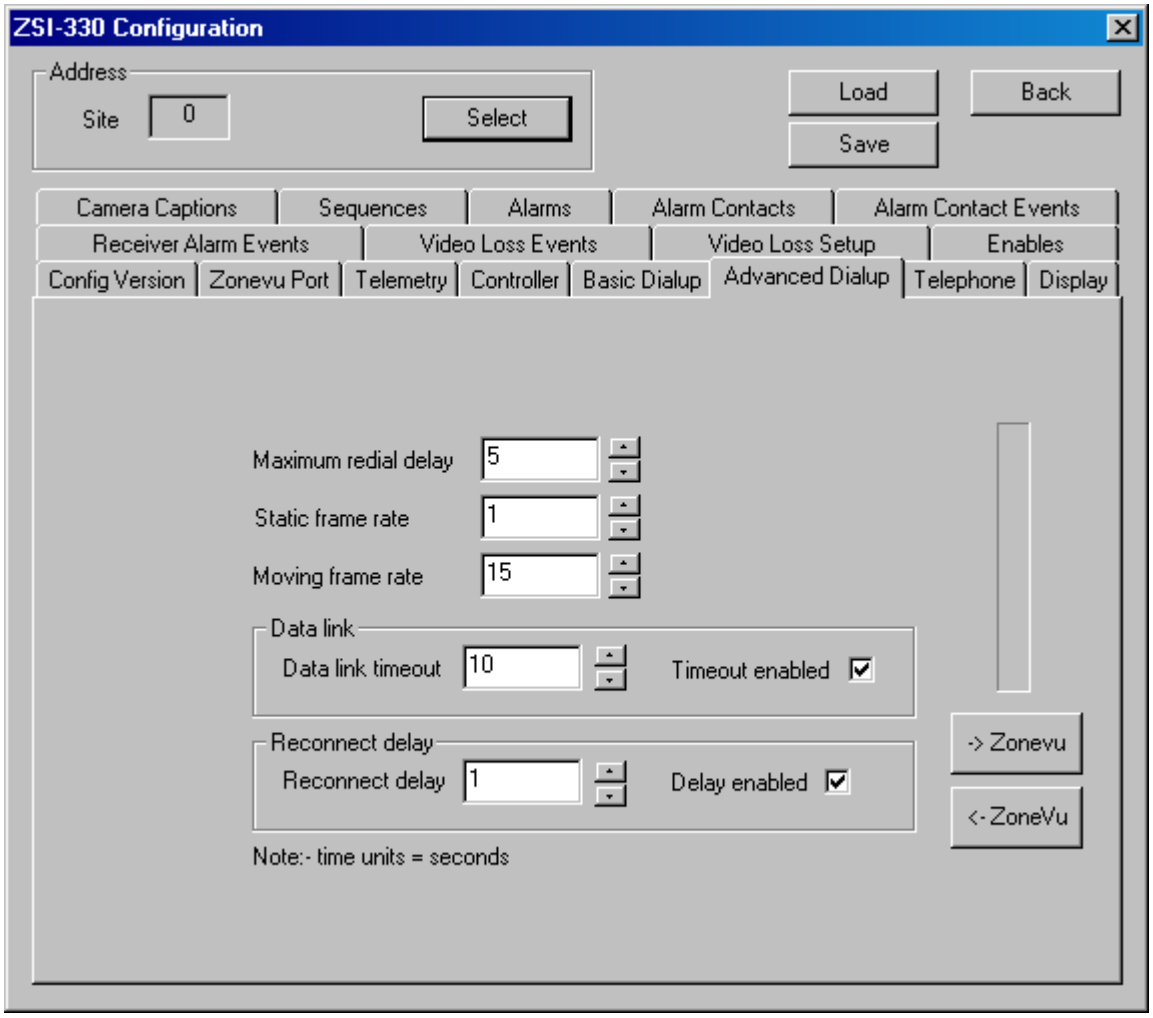
If none of the options are entered, unit defaults are:
Audio in Volume 40%
Audio out Volume 100%
Audio Echo cancellation Off

PIN code

A security code without which remote sites cannot connect. This PIN code is automatically used when connecting to a remote site with security enabled. *1 - 65535*

Default = *[None]*
Enabled = *No*

Advanced Dialup



Maximum redial delay

To avoid contention of phone lines when an outgoing call cannot be connected, a short pause is left to allow other equipment to connect. The maximum time for this delay can be configured. Range *1 - 65535*

Default = *5 seconds*

Static frame rate

The maximum video frame rate can be limited to give better quality images.
When a camera is being controlled over the ISDN line this setting is automatically overridden by the ***Moving frame rate***. The ***Static frame rate*** is re-selected when the camera has not been moved for 3 seconds. Range *1 - 15*

Default = *1*

Moving frame rate

The frame rate can be automatically increased when controlling a camera remotely, to allow easier tracking of moving objects. When the camera is not moved for 3 seconds, the ***Static frame rate*** is used instead. Range *1 - 15*

Default = *15*

Note on changing frame rates

There is a short delay incurred when changing frame rates during a call. This leads to a pause in video updates. If this is not desirable set the ***Static*** & ***Moving frame rates*** to the same value.
The lower the frame rate the better quality of image. The higher the frame rate the quicker the image updates.

Data link timeout

If data cannot be passed over the ISDN line for the specified ***Data link timeout*** period, the call will be dropped and re-dialled. Range *1 - 65535*

Default = *10 seconds*
Enabled = *Yes*

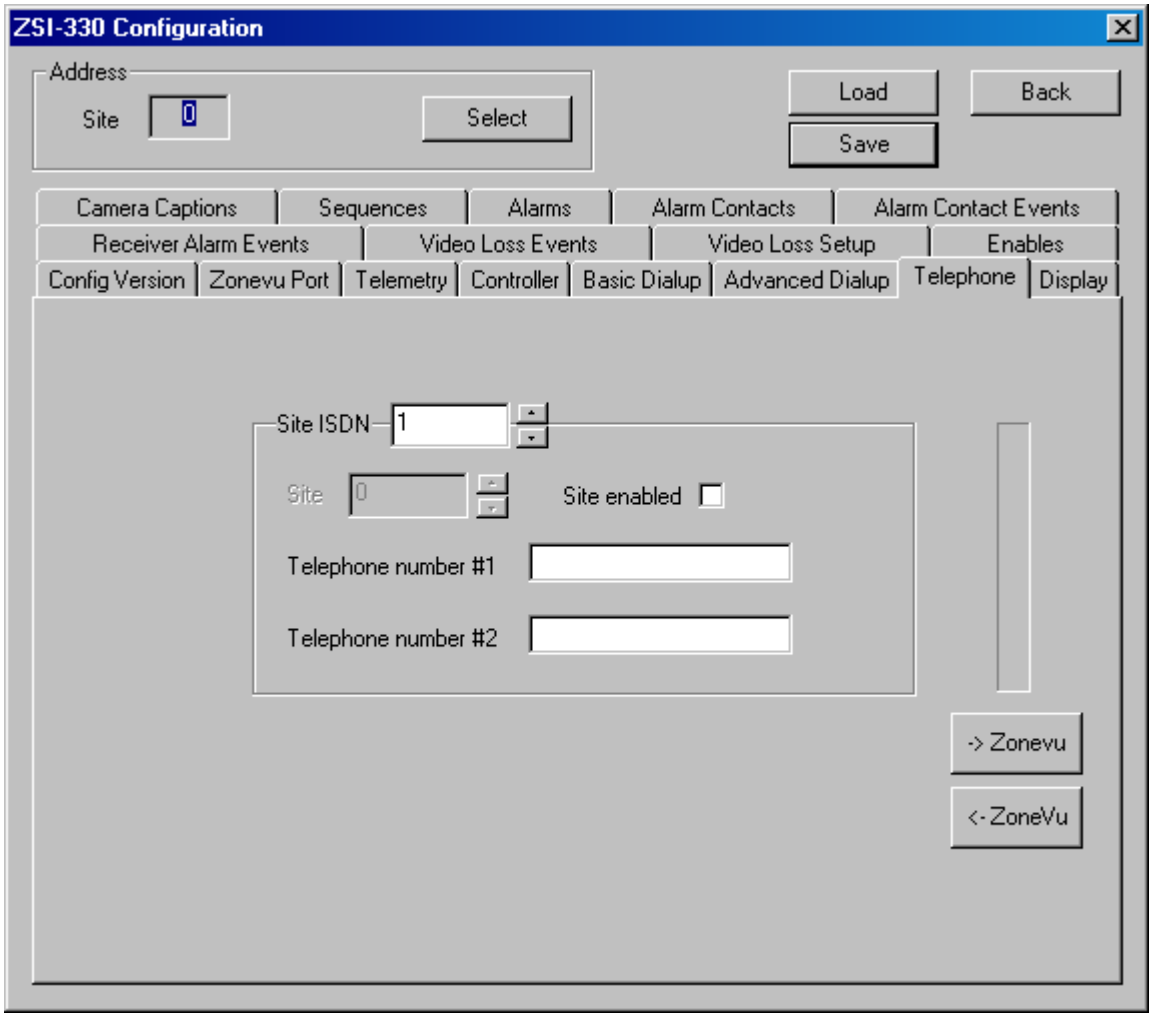
Reconnect delay

If a call is unexpectedly terminated, it can be re-dialled after a short delay. Range *1 - 65535*

Default = *1 second*
Enabled = *Yes*

Telephone

The telephone numbers for up to 20 sites can be configured.



For each entry, the following can be configured

Site enabled

Tick this box to enable this entry in the phone list

Default = *Disabled*

Site

The ZoneVu site number of the remote equipment

Default = *[none]*

Telephone number #1

Enter the ISDN phone number of the remote site. Numbers can be unto 20 digits.

Default = *[blank]*

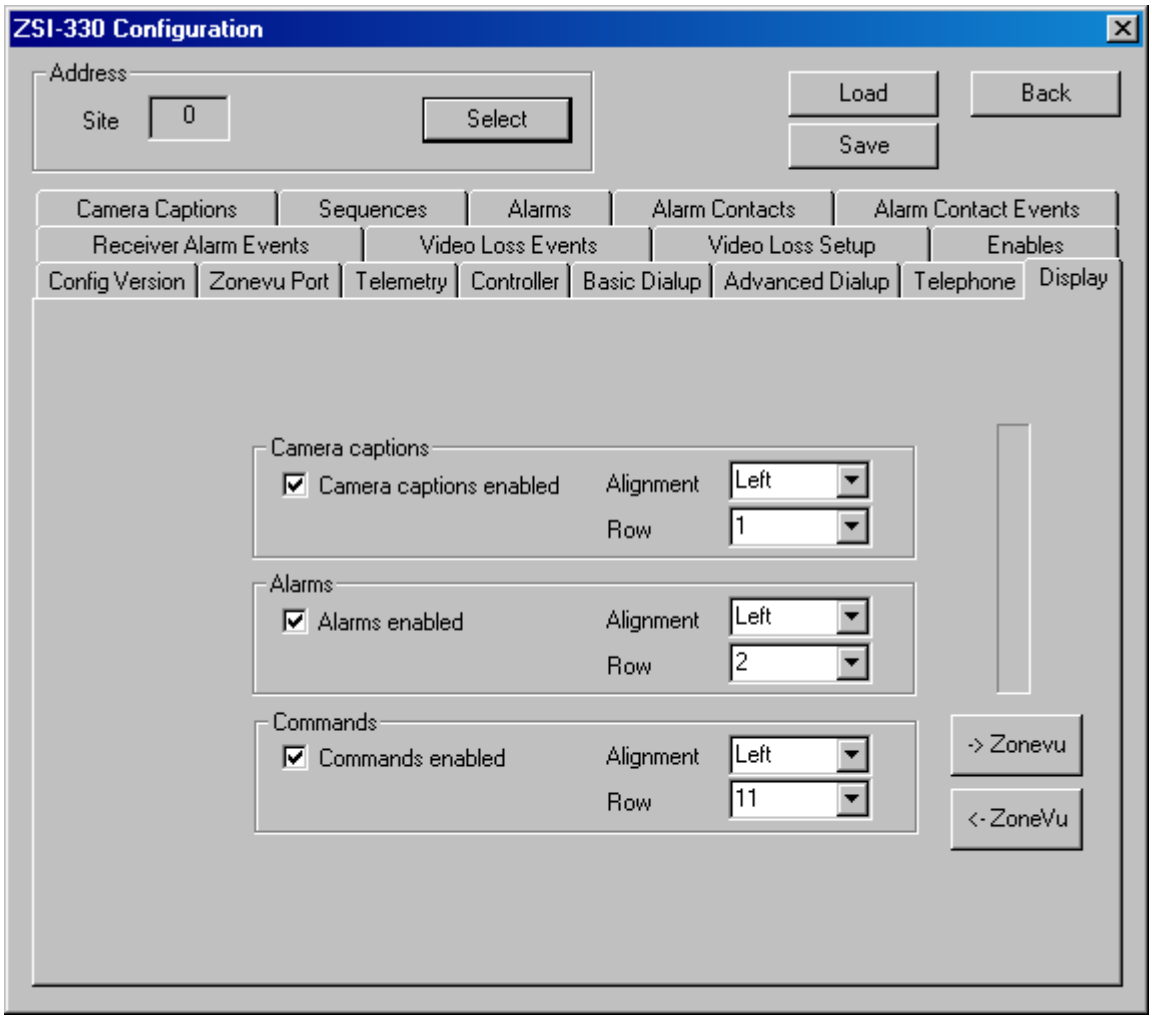
Telephone number #2

Enter the ISDN phone number for the second channel. This is often the same as the first number, or leave blank to make a single (low bandwidth) call.

Default = *[blank]*

Display

Configure the layout for all text displayed on the video. These settings affect both the local and remote display.



There are three configurable display areas

- Camera captions : configurable text for each video input
- Alarms : configurable message displayed when a contact alarm input is triggered
- Commands: messages displayed when a command is received. E.g. ‘Relay 1 On’

For each, the following can be configured

Enabled

This setting overrides any individual setup by camera or alarm, and switches off the selected display area

Default = *On*

Alignment

Align text on the left or right of the screen

Default = *Left*

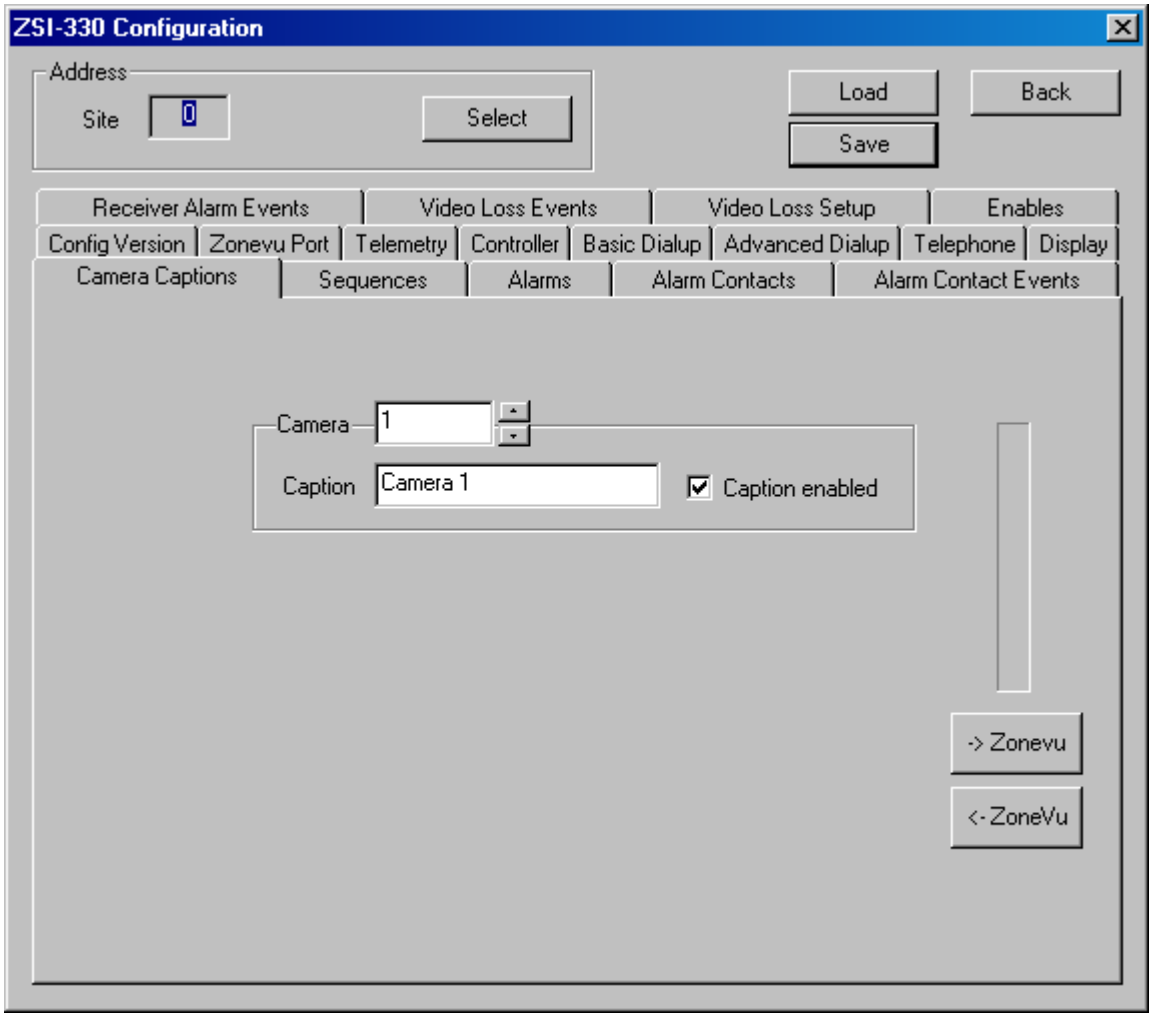
Row

Rows are numbered from 1 at the top, to 11 at the bottom.

Defaults:
Camera captions = *1*
Alarms = *2*
Commands = *11*

Camera Captions

See also **Display** section for other settings that affect Camera Captions



For each Camera 1 to 16:

Caption

The text to be displayed on screen whilst this camera is selected. Captions can be unto 28 characters long.

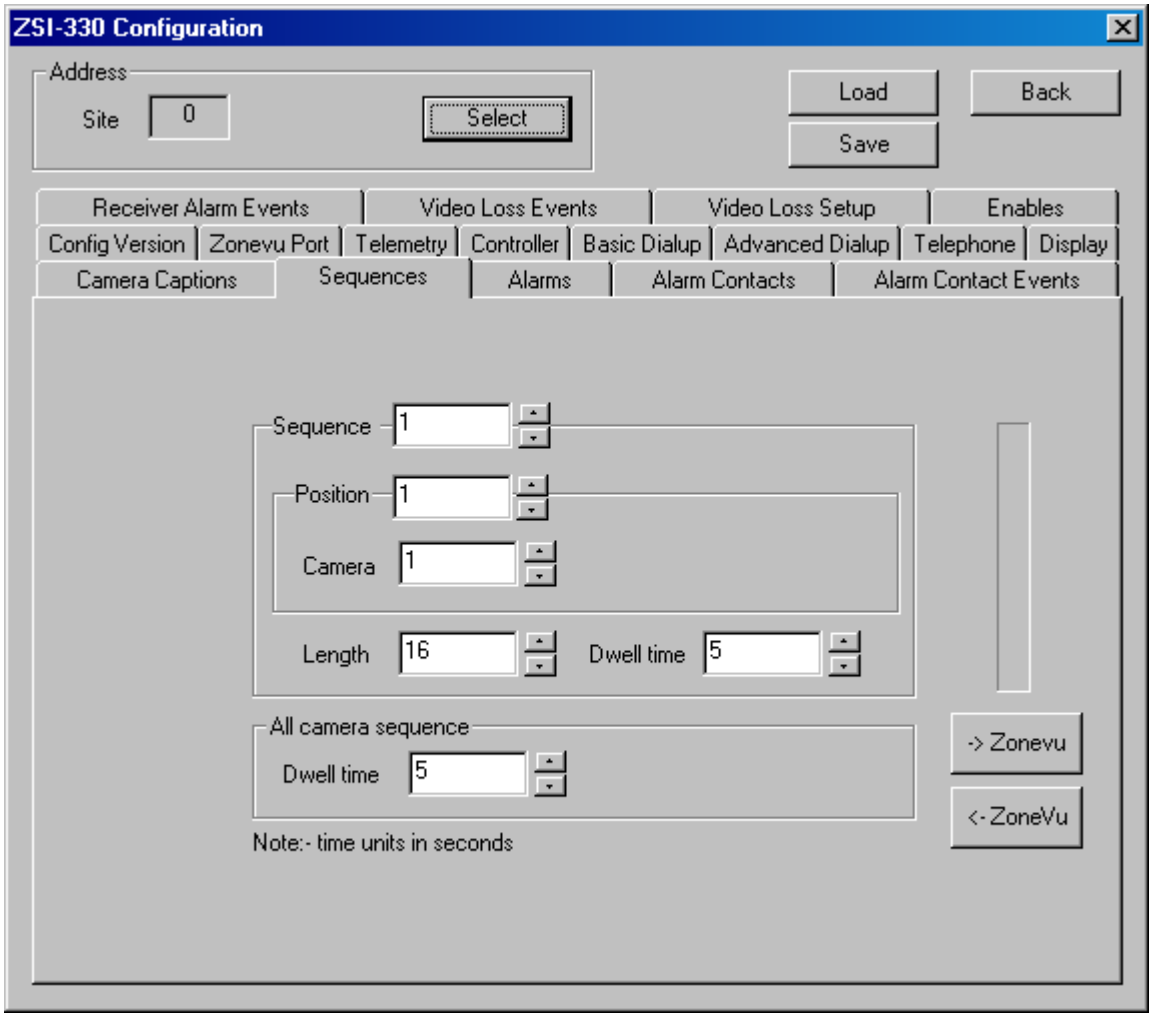
Default = *Camera 1 - 16*

Caption Enabled

The caption can be switched off for individual cameras

Default = *Enabled*

Sequences



For each of the 4 configurable sequences, the following can be setup:

Sequence Position

A sequence can have up to 16 positions, limited by the sequence length. For each position in the sequence:

Camera

The camera input to be viewed

Default = *[position]*

Sequence length

The number of positions in the sequence before returning to the start. Range *1 – 16.*

Default = *16*

Dwell time

The time, in seconds, for which each camera is displayed. Range *1 – 65535.*

Default = *5 seconds*

All camera sequence

A sequence of all camera inputs is available, by selecting Sequence 0. The following can be configured:

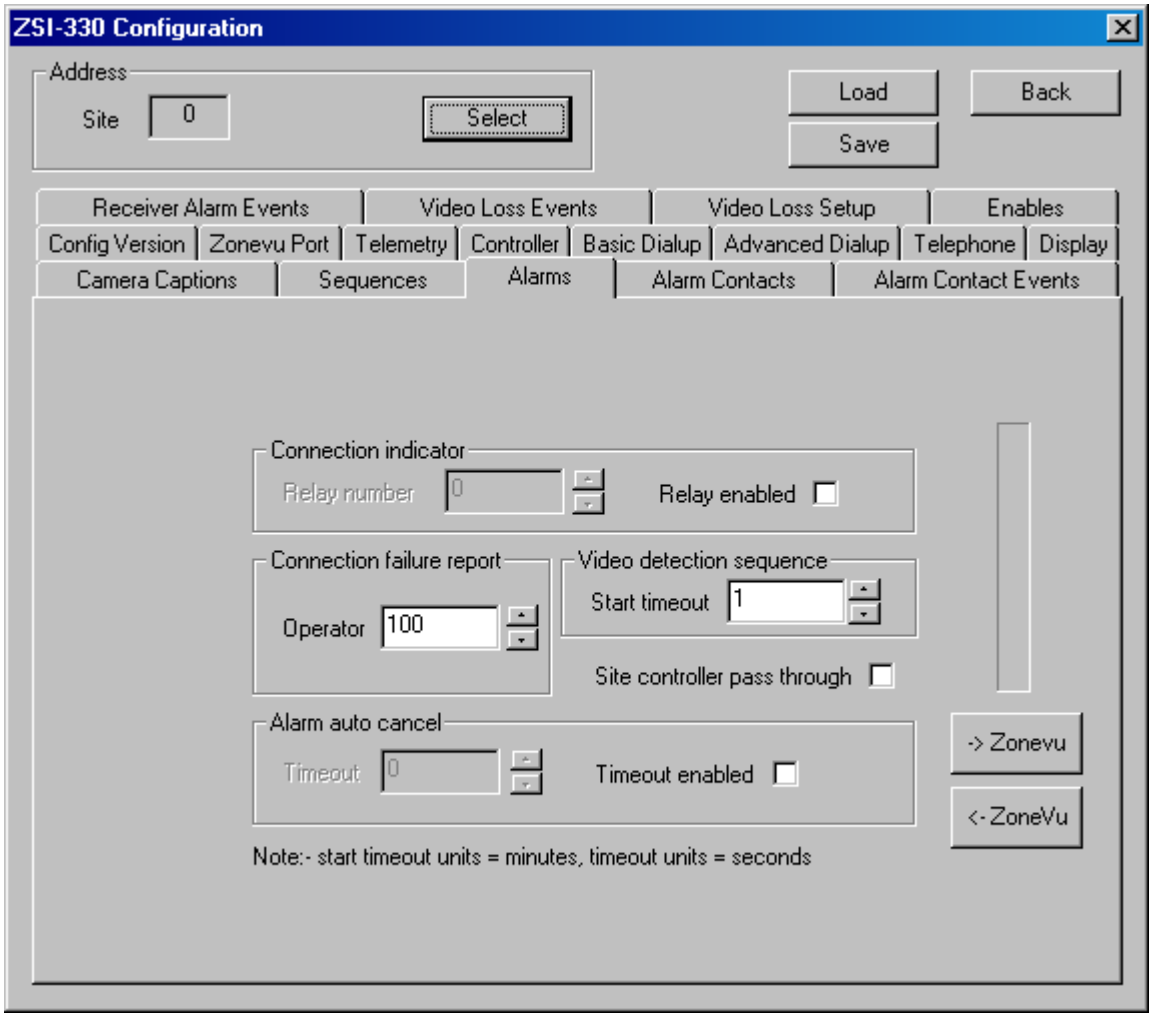
Dwell time

The time, in second, for which each camera is displayed. Range *1 – 65535.*

Default = *5 seconds*

Alarms

General settings for handling the various alarm inputs, and alarm conditions.



Connection indicator

An auxiliary relay output can be used to indicate when the ZSI-330 is using the ISDN line

Relay number

The auxiliary relay output number. Range *1 – 4.*

Default = *[none]*
Enabled = *False*

Connection failure report

When a call is ended unexpectedly, for example due to a line fault, an alarm can be reported.

Operator

The MAC address the condition should be reported to.
The alarm will be reported from *Peripheral 102*, with the alarm number indicating the *site number* which was connected.

Default = *No report*

Video Detection Sequence

If alarm events are enabled for video loss (see **Video loss setup**), then it is necessary to run a camera sequence, during which each video input is checked for video loss, for which video loss events are enabled.

Start timeout

The time, from the last time the monitor was switched, before the video detection sequence is started. The timeout is overridden when a remote operator disconnects a call, in which case the sequence starts immediately. Range *1 – 65535 minutes.*

Default = *1 minute*

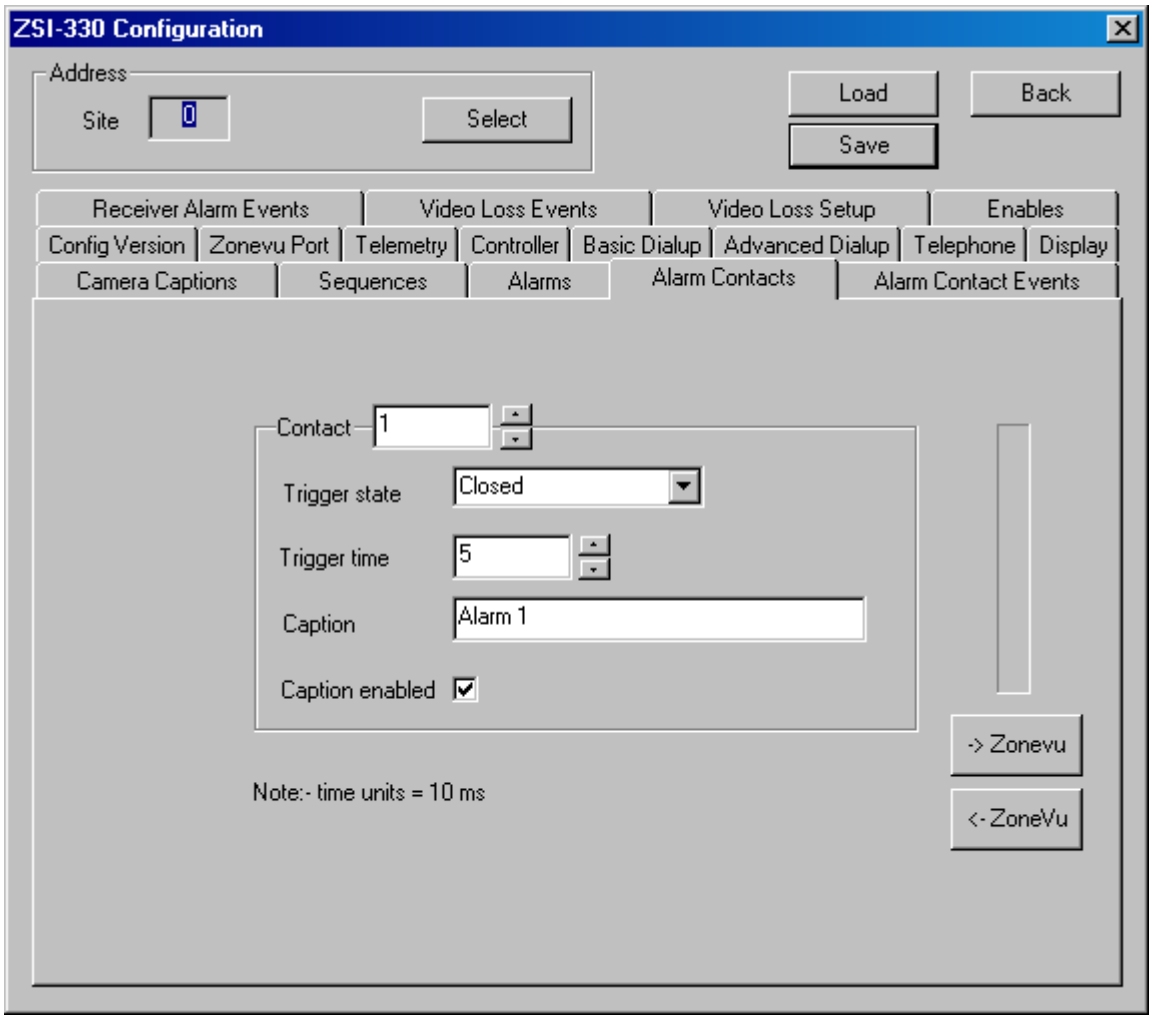
Site controller pass through

This box disables internal event handling, instead passing all alarm triggers to a site controller. **Note this function is not currently available.**

Default = *Disabled*

Alarm Contacts

Setup alarm detection on the 16 contact inputs.



For each of the 16 contact inputs, the following can be configured:

Trigger state

The input state that triggers an alarm. Options: *Open, Closed, Disabled*

Default = *Closed*

Trigger time

The minimum time the input state must match the trigger state, before an alarm is raised. Range *0 – 255 (x10ms)*

Default = 5 (x10ms)

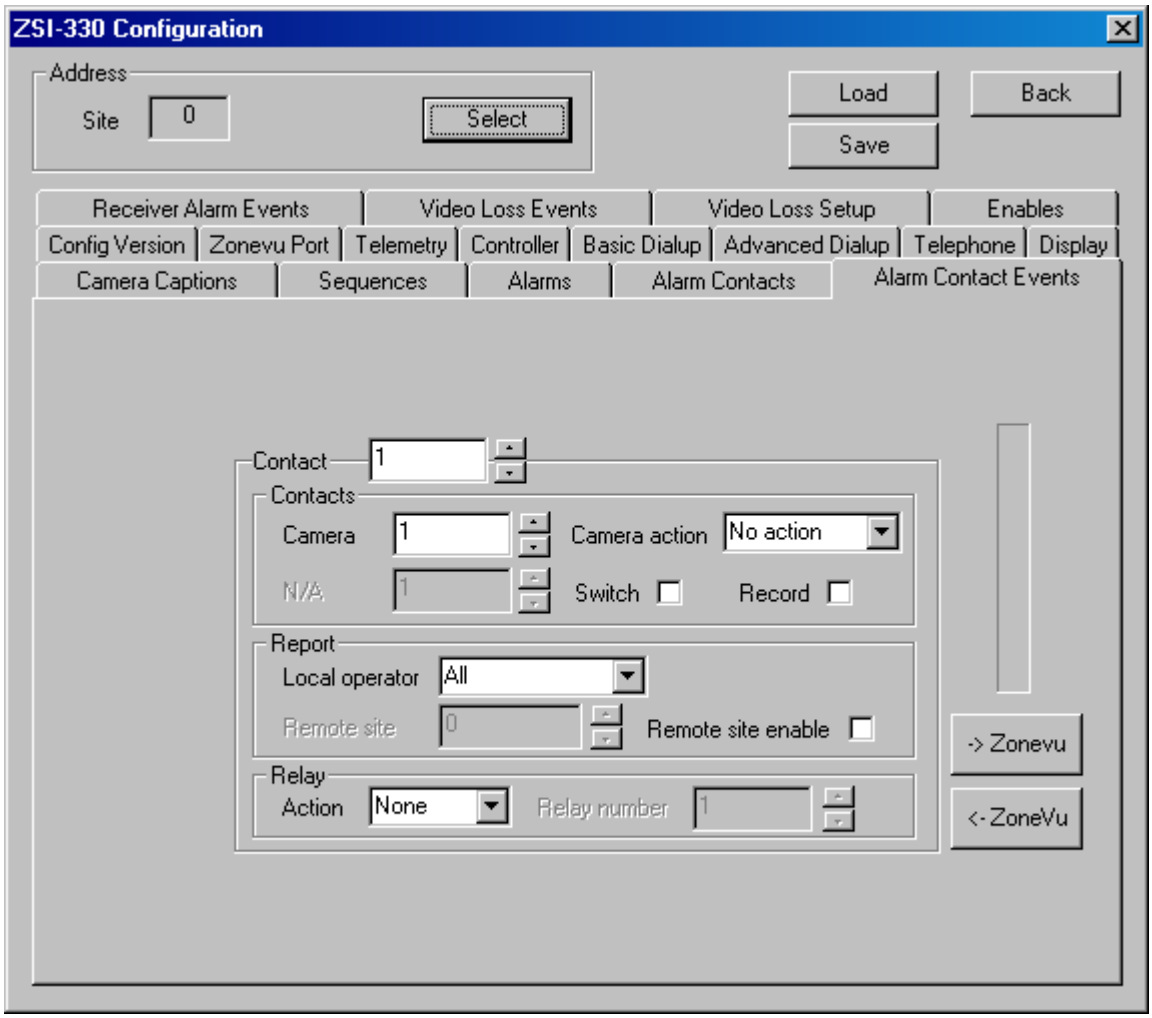
Caption

The text to be displayed whilst the alarm is active. Up to 28 characters long.
See also **Display** section for related settings.

Default = *Alarm 1 – 16*
Enabled = *Yes*

Alarm Contact Events

Configure the actions to be taken when each contact input is triggered.
See also **Alarm Contacts** for related settings.



For each contact 1 to 16 for the following actions can be configured:

Camera

The camera number that will be switched, commanded to a position, and reported to the operator, if configured.

Default = *[same as alarm number]*

Camera action

Sends a command to the camera, to position it. Options: *None, Preset, Home, Patrol, Mimic, Random patrol.*
If an operator has control of the camera at time of alarm, control will be taken away from them, whilst the command is sent, unless they have a priority level of 9.

Default = *None*

Preset / Patrol / Mimic number

According to the camera action selected, a number can be configured, for example the preset number

Switch

If enabled, the monitor will be switched, to view the selected camera. If multiple active alarms have the switch enabled, the most recent alarm will be displayed.

Default = *No*

Record

If enabled, the video will be recorded immediately the alarm is triggered. This feature is intended to capture the vital seconds after an alarm, whilst a connection is made to the remote control room.
The most recent alarm event only can be replayed by the remote operator.

Default = *No*

Report

Local operator

The MAC address of the keyboard to report the alarm to. Other options = *All, None, PC*

Default = *All*

Remote site

The site number of the control room to report the alarm to. If enabled, the remote site is automatically dialled, to report the alarm. A phone number is required for the site number in the **Telephone** section.

Default = *None*
Enabled = *No*

Relay

Action

Select a state for one of the auxiliary relay outputs. Options: *None, Open, Close, Pulse.*
Pulse closes the relay for 1 second.

Default = *None*

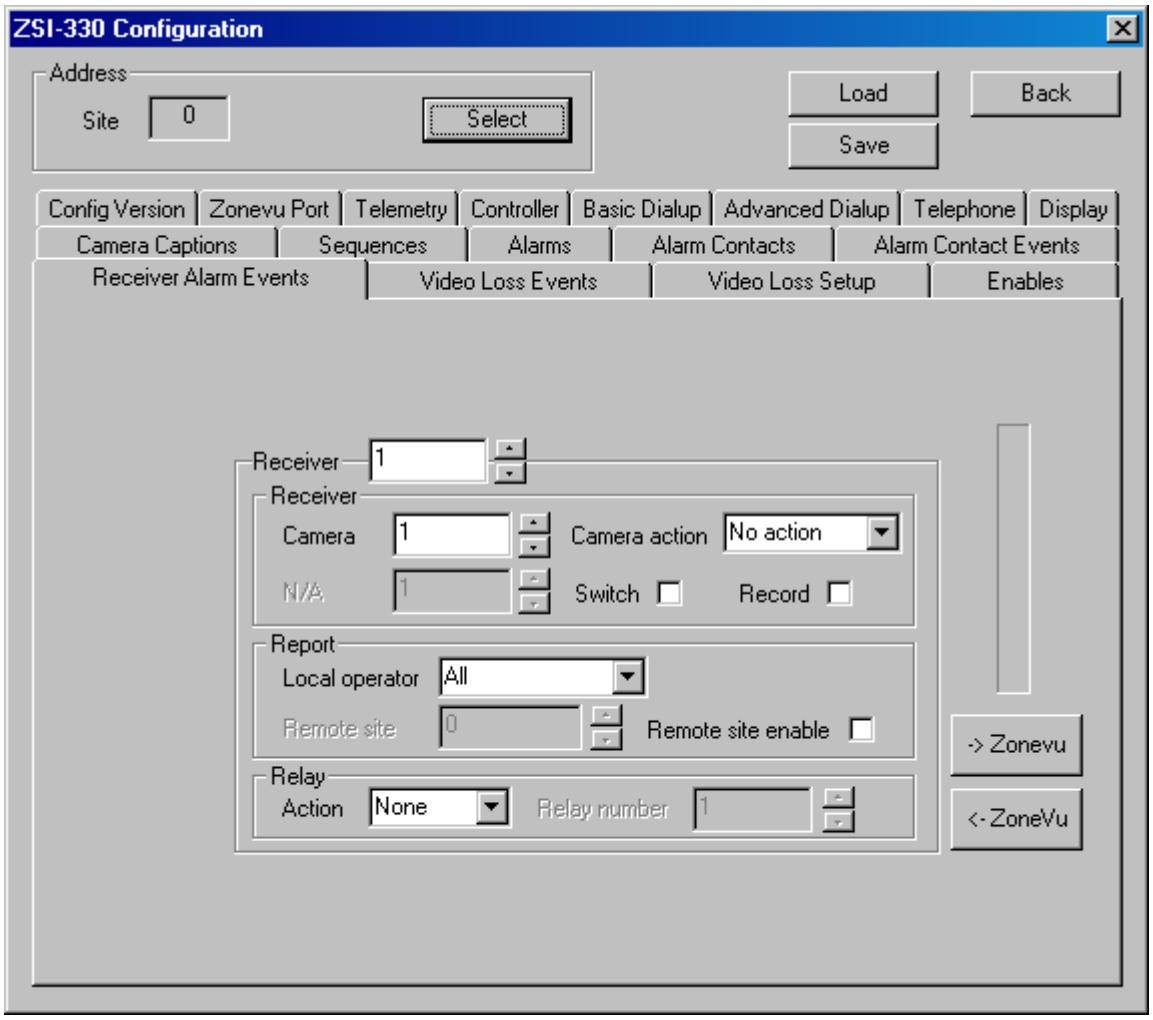
Relay number

The auxiliary relay number, from 1 to 4.

Default = *None*

Receiver Alarm Events

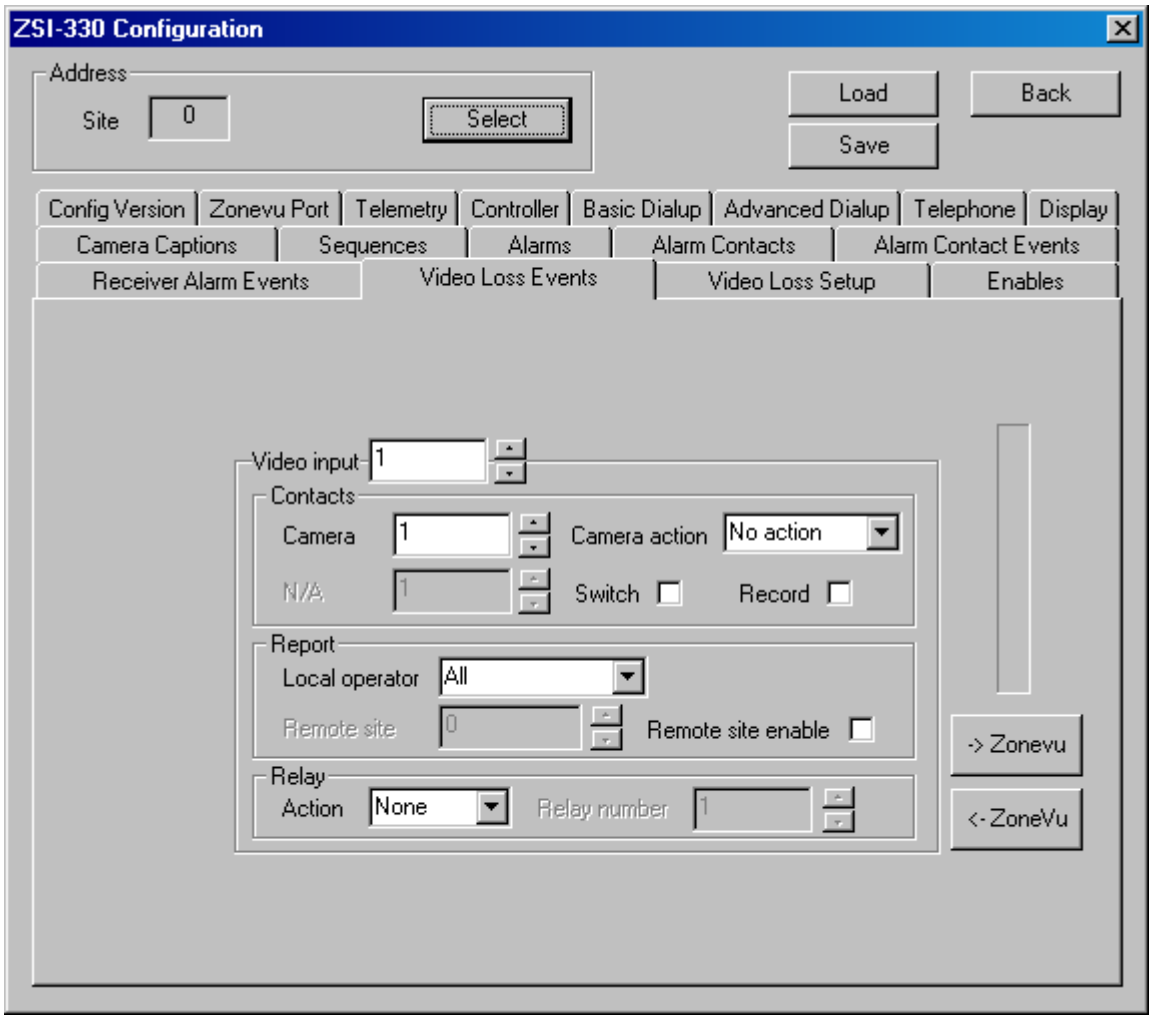
Configure the actions to be taken when an alarm is reported from a receiver.
To enable alarm gathering from a receiver see the *polling* option in the **Telemetry** section.



For each Receiver 1 to 16, actions can be configured as described in the **Alarm Contact Events** section.

Video Loss Events

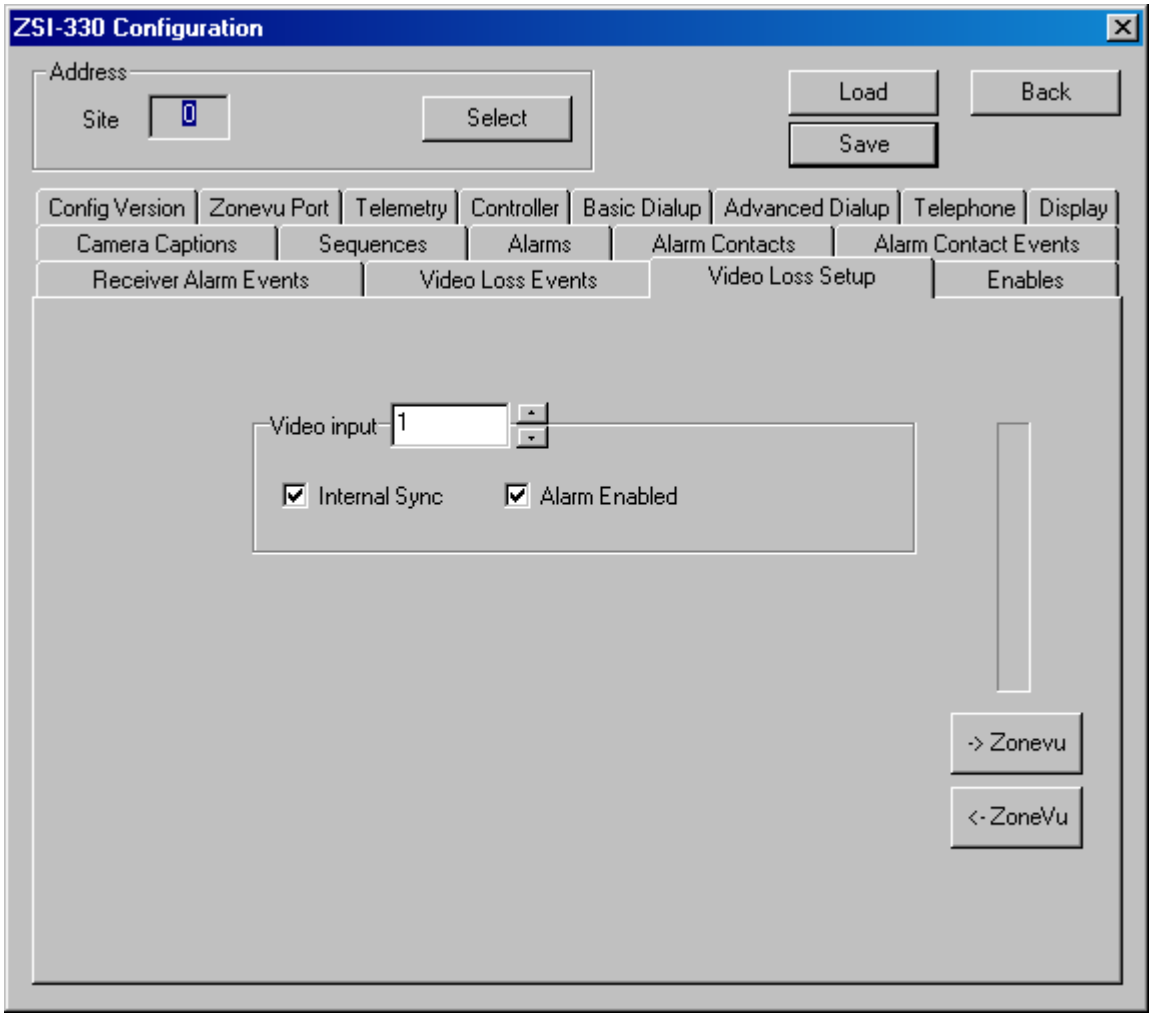
Configure the actions to be taken when video loss is detected on video input.
See also the **Video Loss Setup** section for related settings.



For each Video input 1 to 16, actions can be configured as described in the **Alarm Contact Events** section.

Video Loss Setup

For each video input, configure the way video loss detection is handled



For each video input, the following is configurable:

Internal Sync

If enabled, a blank screen is displayed, with the message 'Video Loss Detected' in the middle, when a camera is selected which does not have a stable video input signal.
With this option disabled, the video input is displayed, but it is not possible to display text without a video signal.

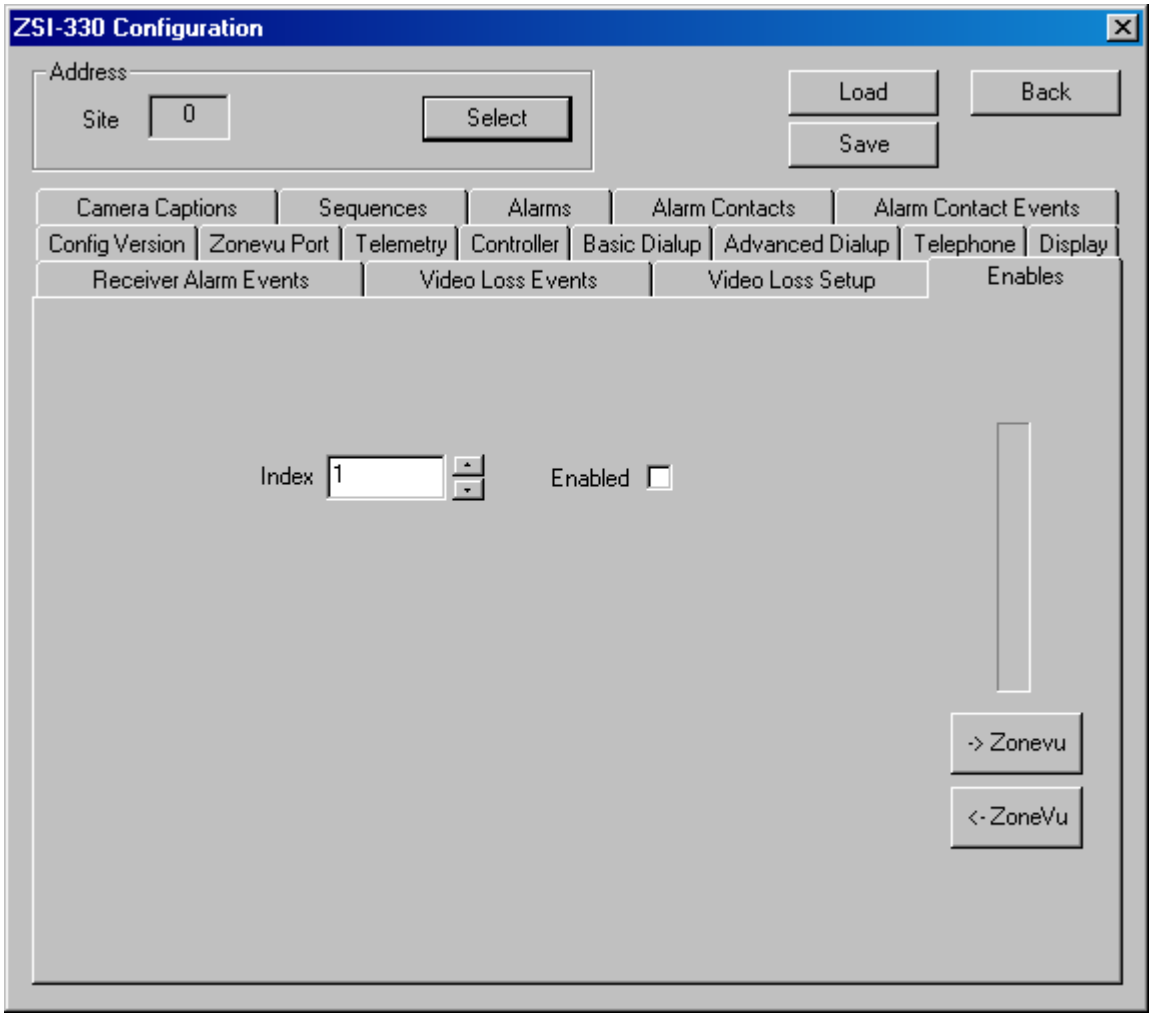
Default = *Enabled*

Alarm Enabled

This option enables the Alarm actions on the **Video Loss Events** screen.
Video loss can only be detected on the input currently displayed.
If this option is enabled, the camera will be automatically included in the *video detection sequence*. See the **Alarms** section for further details.

Default = *Enabled*

Enables



Reserved for future use.

Diagnostics

LEDs

Each serial communications port on the ZSI-330 has LEDs to indicate any Transmit and Receive activity.

The CPU LED maintaining a steady 1Hz flash indicates that the controller has successfully powered up. It also indicates when configuration mode is active with a faster flash rate.

The Line Status LED indicates the usage of the ISDN line.

- 1Hz flash with the LED on for only a short period indicates the ISDN line is idle
- 1Hz flash with the LED off for only a short period indicates that the ISDN line is connected
- Fast flash rate indicates that the ZSI-330 is attempting to make a call.

Commands

These commands, which can be issued by Mpower, are included in this document to assist in the diagnosis of problems.

The use of these commands is at the users own risk and is subject to change without notice.

Fn	Name	Purpose	Notes
0	Initialise	Initialise all modules	
1	LoadDefaultConfiguration	Reset configuration.	All static configuration is set to factory defaults
2	StandaloneTestMode	For factory use only	
3	InitialiseCmdHandler	Re-initialise command stack.	Discards all current commands. May cause memory loss. For debugging only
4	FlushCommandStack	Clear all commands from the stack	Discards all current commands. Will stop CPU LED flashing.
5	InitialiseBothOSD	Re-initialise the display chips	
6	ScreenModeInternalSync	Sets the display to internal sync	Video input will no longer be displayed
7	ScreenModeTranslucent	Selects translucent text mode	
8	ScreenModeOpaque	Selects opaque text mode	
9	InitialiseMonitor	Reselect the current camera or sequence	
10	ReInitialisePC2Port	Re-initialise internal control port	Resets uart & discards commands
11	ReInitialisePC3Port	Re-initialise clear data channel	Resets uart & discards commands
12	ReInitialiseZvmPort	Re-initialise ZoneVu port.	Resets uart & discards commands. Required after changes to comms settings.
13	ReInitialiseZvrPort	Re-initialise ZVR port.	Resets uart & discards commands. Required after changes to comms settings.
14	InitialiseMMT	Initialise 8121 board	Reloads all configuration into 8121, after power-up delay
15	InitialiseDialup	Initialise call status	Assumes call status is idle
16	InitialiseContactAlarms	Reset the status of alarm inputs	
17	InitialiseControl	Reset camera control records	Assumes no camera control held. Restarts control timeout.
18	FlushAlarmQueue	Remove all alarms from queue	No notification is sent to keyboards
19	InitialiseAlarms	Re-initialises alarm module	Discards all alarms. May cause memory loss – for debugging only.
20	RestartApplication	Re-starts application	Simulates power-up
21	RestartMMT	Re-starts 8121 board	Uses serial command to simulate power-up reset.
22	InitialiseTelemetry	Re-initialise telemetry module	Clear receiver alarm status & latched function log.

Meyertech Limited is a member of the CCTV User Group.

Support

Meyertech offer comprehensive levels of support during the product's warranty period. Our support team will be happy to help with any problem you may experience relating to the installation or operation of FUSION-CAPTURE:

1. Telephone support (+44(0)161 628 8406) which is available during normal office hours 9AM – 5PM Monday to Friday excluding Bank holidays. This support is free of charge.
2. Email support. Available 24 hours a day. Our normal response to emails is next working day. This support is free of charge. support@meyertech.co.uk
3. By Facsimile (+44(0)161 628 9811). Available 24 hours a day. Our normal response to facsimiles is next working day. This support is free of charge.
4. Site visits. Subject to availability, our engineers are available to attend site to assess and help with particular system problems firsthand. This service is chargeable. Please contact our Support department on +44(0)161 628 8406 for further details and availability.

Meyertech offer Extended Support Contracts on all their software products. Please contact our Sales department on 0161 628 8406 to discuss your requirements or visit our website www.meyertech.co.uk

Maintenance

The ZSI-330 requires no Planned Preventive Maintenance periods (PPM's) as it is mainly solid state in design.

The ZSI-330 contains no serviceable parts and should be returned to our Service Centre in Scunthorpe for repair or replacement under warranty. Any repairs, attempted repairs or replaced components not carried out by the Meyertech Service Centre will void all Meyertech warranties and liabilities.

If your ZSI-330 has to be returned to our Service Centre please follow the returns procedure below, otherwise delays may be incurred in returning or replacing the ZSI-330.

Returns Procedure

Prior to returning your ZSI-330.

1. Contact our Service Centre by phone on 01724 278833 or by email support@meyertech.co.uk for a Goods Return Number.
2. The GRN will be logged by our staff along with the reported problem.
3. Pack the ZSI-330 into the original packing it was delivered in. Failure to do so means the unit may incur further damage in transit, which Meyertech cannot be responsible for.
4. Organise delivery of the ZSI-330 back to our Service Centre in Scunthorpe. Use a reputable carrier, as again Meyertech cannot accept liability for loss of goods in-transit.
5. On receiving the ZSI-330 our staff will, after initial examination advise of the course of action we intend to take.
    a. Repair the ZSI-330 under warranty. The ZSI-330 will be repaired and returned to you free of charge.
    b. Replace the ZSI-330 under warranty. The ZSI-330 will be repaired and returned to you free of charge.

c. Repair the ZSI-330 at a quoted cost. An official purchase order to cover the cost and return of the product will be required prior to commencement of repair.
d. Advise you that the ZSI-330 is not repairable. You can then decide to have the product returned to you at the standard delivery charge or we can dispose of the product free of charge.

Meyertech Service Centre
Unit 4E Queensway Business Centre
Dunlop Way
Scunthorpe
DN16 3RN

Tel: 01724 278833
Fax: 01724 289099

Disposal

There are no additional requirements beyond safe working practice in the decommissioning of the Meyertech ZSI-330.

However the ZSI-330 contains printed circuit boards populated with electronic components. The whole unit must be returned to **Meyertech Service Centre** for final disposal. Please follow the normal returns procedure.

Warranty

Please refer to Meyertech Limited 'Terms & Conditions of Sale of Goods & Services' for interpretation.

1. If the Buyer establishes to the Seller's reasonable satisfaction that there is a defect in the materials or workmanship of the Goods manufactured, then the Seller shall at its option, at its sole discretion and within a reasonable time,
    a. arrange for the repair or making good such defect or failure in such Goods free of charge to the Buyer (including all costs of transportation of any Goods or materials to and from the Buyer for that purpose),
    b. replace such Goods with Goods which are in all respects in accordance with the Contract, or

    subject, in every case, to the remaining provisions of this Condition 1 provided that the liability of the Seller under this Condition 1 shall in no event exceed the purchase price of such Goods and performance of anyone of the above options shall constitute an entire discharge of the Seller's liability under this warranty.

2. Condition 1 shall not apply unless the Buyer:

    a. notifies the Seller in writing of the alleged defect within 12 (twelve) months from delivery or such other period or periods as may be agreed in writing between the Seller and the Buyer, and
    b. allows the Seller a reasonable opportunity to inspect the relevant Goods.

3. For the avoidance of doubt, the Seller shall be under no liability under the warranty in Condition 1 above:
    a. where such defects arise from any drawing, design or specification supplied by the Buyer; or
    b. where such defects arise from fair wear and tear, wilful damage, or negligence of a party other than the Seller (or its employees or authorised personnel), abnormal working conditions, failure to follow the Seller's instructions (whether oral or in writing), misuse or alteration or repair of the Goods without the Seller's approval; or
    c. where such defects arise in parts, materials or equipment which have not been manufactured or designed by the Seller but have been purchased at the Buyer's request by the Seller from the Buyer's designer and manufacturer or from some other third party (the **"Third Party Supplier").**
    d. if the total price of the Goods has not been paid by the due date for payment
    e. in respect of any type of defect, damage or wear specifically excluded by the Seller by notice in writing: or
    f. if the Buyer makes any further use of the Goods after giving notice in accordance with Clause 1

4. Any repaired or replaced Goods shall be redelivered to the Buyer free of charge to the original point of delivery but otherwise in accordance with and subject to these Conditions.

5. Alternatively to Condition 1 the Seller shall be entitled at its absolute discretion on return of the defective Goods to the Seller (at the Seller's request) to refund the price of the defective Goods in the event that such price shall already have been paid by the Buyer to the Seller, or, if such price has not been paid, to relieve the Buyer of all obligation to pay the sum by the issue of a credit note in favour of the Buyer in the amount of such price.

6. In respect of all Goods supplied to the Seller by a Third Party Supplier the Seller will on request pass on to the Buyer (in so far as reasonably possible) the benefit of any warranty given to the Seller by such Third Party Supplier and will (on request) supply to the Buyer details of the terms and conditions of such warranty and copies of any relevant product information sheets, technical data sheets or product leaflets issued by such Third Party Supplier and the Buyer shall be solely responsible to the entire exclusion of the Seller for complying with the same.

7. For the purposes of Condition 1 references to Goods shall be deemed to exclude software.

8. The Buyer acknowledges that software in general is not error-free and agrees that the existence of such errors in the Software Programs shall not constitute a breach of this Contract.

9. In the event that the Buyer discovers a material error which results in the Programmed Products not performing substantially in accordance with the Functional Specification, or the Licensed Programs not performing substantially in accordance with the relevant Program Documentation and notifies the Seller of the error within 90 days from the date of the Seller making available the respective software to the Buyer (the **`warranty period"**) the Seller shall at its sole option either refund the price which the Buyer has paid to the Seller (or if such price has not been paid, relieve the Buyer of all obligations to pay the sum) in respect of the respective software or use all reasonable endeavours to correct by patch or new release (at its option) that part of the software which does not so comply provided that such non-compliance has not been caused by any modification, variation or addition to the software not performed by the Seller or caused by its incorrect use, abuse or corruption of the software by use of the software with other software or on equipment with which it is incompatible,

10. To the extent permitted by English law, the Seller disclaims all other warranties, with respect to the software which it provides pursuant to the Contract, either express or implied, including but not limited to any implied warranties of satisfactory quality or fitness for any particular purpose.

11. The Buyer is solely responsible for various scanning the software that it receives from the Seller pursuant to the Contract.

12. The Seller warrants that it will use reasonable skill and care in providing the Services to the buyer